

19. (C) Shell Condensate Disposal Problem: Shell, Sapele-Ogben field is gas-rich. However, the gas contains a high level of natural gas liquids (NGL), benzene and C5 condensate. The Egbin thermal power plant in Lagos can use gas as fuel but only if it is condensate-free. In order to get the gas to Egbin, space in the Escravos-Lagos pipeline must be created. Shell pumps the gas with condensate to Warri, where the Warri Refinery has a condensate holding tank. However, the tank is damaged, and consequently must be evacuated often or backflow will occur and create problems at Egbin. To avoid these problems, Shell has been pumping some condensate directly to the jetty. The company is seeking bidders on a contract for condensate disposal.

¶10. (C) Another problem facing the WAGP is that a leak has been discovered in the pipeline between Lagos Beach and Ghana. The leak is difficult to find because the line is buried underground offshore. Agha predicts it will take a long time to find and repair the leak.

¶11. (C) A third major problem with the WAGP is that large rocks between the pipeline and the shore of Ghana make installing a connecting pipeline difficult. A solution must be found to remove or reduce the size of the rocks that lie along the shore. In addition, the pipeline will have to be angled so as to create a sufficient gradient to allow gas to flow. These are large engineering hurdles to overcome, Agha said.

OKLNG: Obasanjo's Home State Project

¶12. (C) Chevron and Shell are partners in the Olokola Liquefied Natural Gas facility (OKLNG) which will produce gas for export. Former President Obasanjo took a keen interest in this project, seeing it as a way to transform Ogun State, where he has his farm, into an oil and gas producing state. To accomplish this, he forced a change in the location of the project from Delta State to the border between Ogun and Lagos states. However, by the time the OK project was on the drawing boards, Agha said, the Government of Nigeria had begun to have second thoughts about using for another plant the same model on which the Nigeria Liquefied Natural Gas (NLNG) project had been built (See Ref A) for another plant. NLNG was a huge success but on terms very favorable to the investors and less so to the GON, in the government's view. NLNG buys gas, which includes both condensate (the equivalent of light crude oil) and Liquefied Petroleum Gas (LPG) in volume then sells the resulting LNG in energy value. According to Agha, the government believes it gets no profit from this arrangement and feels shortchanged.

¶13. (C) As a result, Agha said, the government decided not to use the NLNG model for the OK plant. OK was created as a tolling project. Each supplier company owns the gas it sends to the plant. Chevron has announced that before sending the gas to the plant, the company will separate the gas into LPG and condensate, measure each, then recombine them and send the recombined gas to the plant where it will be processed into LNG and condensate. Chevron will pay for processing the gas and will collect its own condensate at the end of the process.

LAGOS 00000633 003 OF 003

¶14. (C) Front-end engineering for the OK project has been completed. There are some supply issues and some metering issues that have had to be resolved. In addition, the pipeline from the plant to the ships will be very long, creating numerous engineering problems similar to those faced by the Brass LNG project, Agha said.

Brass LNG: Expensive Engineering Problems

¶15. (C) At a cost of USD 8.8 billion, the Brass LNG plant is the most expensive of all the plants planned for Nigeria. A consortium made up of Total, Shell and Conoco Phillips will supply gas to the facility. The major problem with the plant, aside from its expense, is that the pipeline that takes the LNG from the plant to the ships is eight kilometers long. This is because there is a very gradual dropoff, making it impossible for deep draft vessels to come in close to the shore to load. In addition, the high level of sedimentation near the shore makes it difficult to dredge to a depth required by ocean-going vessels. The gas, which is liquefied by cooling, must remain at -161 degrees Fahrenheit as it passes through the 8 kilometer pipeline so that it will flow as a liquid; if the temperature in the pipeline goes up, the LNG will turn back into gas, and escape upon loading, Agha

said.

NLNG: Sweet Deal Guaranteed Add-On Trains

¶16. (C) The agreements initiating the Nigeria Liquefied Natural Gas Project provided that any expansion of the project be on the same favorable terms as were granted for construction of Trains 1-3. The project makes money both on the exported gas and on condensate. Train 7 is now on line, Agha said and the company plans to add additional trains.

¶17. (C) Comment: Nigeria's Minister of State for Petroleum Resources told the press on the margins of the recent OPEC meeting that the government is exploring new mechanisms for funding joint venture oil and gas operations. His comment may mean the GON is showing a new willingness to pay its rightful share of the cost of exploration for new fields and to prove reserves to provide gas for both domestic and export use.
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